

REMARKS

Claim 60 has been amended. Claims 63 and 64 have been newly added. Claims 26-28, 30-35, 37, 38, 40-48, and 57-64 are pending in the application. Applicant reserves the right to pursue the original claims and other claims in this and other applications.

Claims 60-62 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement for allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. To obviate this rejection, claim 60 has been amended to recite that “the interpolator further comprises four scalar multipliers for multiplying the digital bit values of the spectral component measurements from the four photosensitive sites neighboring the photosensitive site being interpolated.”

Accordingly the rejection should be withdrawn.

Claims 26-28, 30-35, 37, 38, 40, 42, and 58 stand rejected under 35 U.S.C. 102(a) as being anticipated by International Patent Application No. 97/35438 to Denyar et al. (“Denyar ‘438”). This rejection is respectfully traversed.

Independent claim 26 recites “an interpolator located on the substrate and comprising a configuration enabling the interpolator to estimate the level of the first spectral component in the light received by at least one of the second photosensitive sites based on at least one measurement of the first spectral component obtained respectively by at least one of the first photosensitive sites.” Denyar ‘438 does not teach these limitations.

The Office Action states that Denyar ‘438 teaches this limitation at page 12, lines 10-19 where Denyar ‘438 states that the “color channels are interpolated to provide missing data by lowpass-filtering using a square area template” and that “the component colour channel represents a lowpass-filtered (spatially smoothed) version of the ideal component colour channel response.” (Office Action, page 8). Applicants respectfully disagree with the Office Action’s conclusion because Denyar ‘438 does not teach or suggest what data is used from the square area template to

conduct the interpolation or obtain a spatially smoothed version of the ideal component colour channel response. Using a green pixel as an example, as suggested by the Office Action at page 8, Denyar '438 does not teach or suggest estimating the level of the red or blue light received by a green pixel based on a measurement of the red or blue light obtained by a red or blue pixel, and instead only describes "using a square area template". (Denyar '438). Therefore, Denyar '438 does not teach or suggest estimating "the level of the first spectral component in the light received by at least one of the second photosensitive sites based on at least one measurement of the first spectral component obtained respectively by at least one of the first photosensitive sites" as recited by claim 26.

The Office Action also states that Denyar '438 "discloses that for luminance determination, the Green color component is calculated performing interpolation of Green color components surrounding sites that do not receive Green color to obtain the luminance component for said sites" at page 13, line 8 – page 15, line 20 of Denyar '438. (Office Action, page 8). Applicants respectfully disagree with this statement. At page 13, line 8 – page 15, line 20, Denyar '438 only discusses estimating luminance, and does not disclose estimating the level of a spectral component of light. Therefore the portion of Denyar cited by the Office Action is irrelevant to the current rejection of claim 26.

Since Denyer '438 does not teach all of the limitations of claim 26, claim 26 is not anticipated by Denyer '438. Independent claim 37 includes limitations similar to those of claim 26 and is allowable for the same reason. Claims 27, 28, and 30-35 depend from claim 26 and are patentable at least for the reasons mentioned above. Claims 38, 40, and 42 depend from claim 37 and are patentable at least for the reasons mentioned above. Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 41 and 57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Denyer '438 in view of U.S. Patent No. 6,091,851 to Acharya. This rejection is respectfully traversed. Claims 41 and 57 depend from claim 26 and 37 respectfully and are patentable over Denyer '438 for at least the reasons mentioned above. Acharya, which has been cited as allegedly

teaching the use of 24 bits, does not cure the deficiencies discussed above. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 43 and 59-62 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Denyer '438 in view of U.S. Patent No. 5,990,946 to Sakurai et. al ("Sakurai"). This rejection is respectfully traversed. Claims 43 and 59-62 depend from claims 26 and 37 respectively and are patentable over Denyer for at least the reasons mentioned above. Sakurai, which has been cited as allegedly teaching applying a weighting coefficient that is associated to the distance from the target pixel to the color component being estimated, does not cure the deficiencies discussed above. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

Claims 44-48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Denyer '438 in view of International Patent Application No. 97/20434 to Denyar et al. ("Denyar '434"). This rejection is respectfully traversed. Independent claim 44 includes limitations similar to those of claim 26 and is allowable over Denyer '438 for at least the same reasons mentioned above. Denyar '434, which has been cited as allegedly teaching a display for displaying an image on an array of $M \times N$ pixels, does not cure the deficiencies discussed above. Since the combination of Denyer '434 and Denyer '438 does not teach or suggest all of the limitations of claim 44, claim 44 is not rendered obvious by the combination. Claims 45-48 depend from claim 44 and are patentable at least for the reasons mentioned above. Accordingly, Applicant respectfully requests that the rejection be withdrawn and the claims allowed.

In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By  # 411198
Thomas J. D'Amico

Registration No.: 28,371
David T. Beck
Registration No.: 54,985
DICKSTEIN SHAPIRO LLP
1825 Eye Street, NW
Washington, DC 20006-5403
(202) 420-2200
Attorneys for Applicant